

Listing of Claims

- 1-13 (Cancelled)
14. (New) A transgene comprising, in operable combination, i) a nucleotide sequence encoding a Herpes Simplex Virus (HSV) promoter, ii) a nucleotide sequence encoding HSV-thymidine kinase (HSV-tk), iii) a nucleotide sequence encoding a selection marker, iv) a nucleotide sequence encoding a transcription regulator located between the HSV promoter and the HSV-tk sequence, wherein the nucleotide sequence prevents the transcription of HSV-tk and wherein the sequence is located between two Lox P sites, v) a nucleotide sequence encoding a protamine promoter, vi) a nucleotide sequence encoding a cellular localization signal and, vii) two flanking sequences, wherein the two flanking sequences allow for the insertion of the transgene into a sex cell.
15. (New) The transgene of Claim 14, wherein said flanking regions are selected from a group consisting of TSPY flanking regions and HPRT flanking regions.
16. (New) The transgene of Claim 15, wherein said HPRT flanking regions are amplified via PCR using primers selected from a group consisting of SEQ ID NOs: 1 - 4 and said TSPY flanking regions are amplified via PCR using primers selected from a group consisting of SEQ ID NOs: 5 - 8.
17. (New) A method comprising the transfection of the transgene of Claim 14 into embryonic stem cells to create transfected embryonic stem cells.
18. (New) A method comprising the introduction of the transfected embryonic stem cells of Claim 17 into blastocyte embryos to create transfected blastocyte embryos.
19. (New) A method comprising the transfer of the transfected blastocyte embryos of Claim 17 into the uterus of one or more pseudopregnant females of the same species as the transfected blastocyte embryos and carrying the pregnancy to produce offspring.
20. (New) A method comprising the breeding of the offspring of the females of Claim 19 such that the female offspring comprising the transgene comprising the HPRT flanking regions are breed to wild type males to produce offspring.

21. (New) A method comprising the breeding of the offspring of the females of Claim 19 such that the male offspring comprising the transgene comprising the TSPY flanking regions are bred to wild type females to produce offspring.
22. (New) A method comprising screening the offspring of Claim 20 to identify offspring comprising the transgene.
23. (New) A method comprising screening the offspring of Claim 21 to identify the offspring comprising the transgene.
24. (New) A method comprising breeding the male offspring comprising the transgene of Claim 22 to wild type females to produce offspring.
25. (New) A method comprising breeding the male offspring comprising the transgene of Claim 23 to transgenic females comprising a transgene for Cre recombinase activity to produce offspring.
26. (New) A method comprising determining the gender of the offspring of Claim 24.
27. (New) A method comprising determining the gender of the offspring of Claim 25.

Remarks

The newly added claims contain no new matter. Support for the new claims can be found in the canceled claims 1 – 13 and in the specification. Although the entire specification supports the new claims, a specific exemplification can be found on pp 8, line 8 – pp 10 line 2. Additionally, support for applying the invention to a wide variety of organisms can be found on pp 3, line 27 to pp 8, line 6. The Applicants believe that the new claims as presented comprise the full scope of the invention as previously claimed.

Summary

In light of the above, consideration of the subject patent application is respectfully requested. Any deficiency or overpayment should be charged or credited to Deposit Account No. 500282.

Respectfully submitted,



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